U.S. Patent Application No.: 09/943,262

Docket No.: 01743/193

IN THE CLAIMS:

No claims are currently amended:

1. (Previously presented) A scanning charged-particle microscope having a charged-particle source.

a lens for focusing the charged-particle beam emitted from said charged-particle source, and

a scanning deflector for scanning said charged-particle beam in two-dimensional form on a sample,

wherein said scanning charged-particle microscope is characterized in that a passage aperture for limiting the passage of the charged-particle beam is located between the charged-particle source and said scanning deflector, and in that a member for limiting the passage of the charged-particle beam is provided at least in the center of said passage aperture, and

an image of said sample is obtained by scanning said charged-particle beam having passed through said passage aperture on said sample using said scanning deflector.

- 2. (Previously presented) A scanning charged-particle microscope as set forth in Claim 1 above, wherein the scanning charged-particle microscope is characterized in that the half-opening angle of said aperture for said charged-particle beam focused on a sample by said focusing lens has a band with respect to specific values of α_a and α_b .
- 3. (Previously presented) A scanning charged-particle microscope as set forth in Claim 1 above, wherein the scanning charged-particle microscope is characterized in that said passage aperture is formed in a plate-like body, and in that said plate-like body is formed movably with respect to said charged-particle beam.
- 4. (Original) A scanning charged-particle microscope as set forth in Claim 3 above, wherein the scanning charged-particle microscope is characterized in that said plate-like body is provided with a circular aperture in addition to said passage aperture.

U.S. Patent Application No.: 09/943,262 Docket No.: 01743/193

5. (Previously presented) A scanning charged-particle microscope having a charged-particle source,

a lens for focusing the charged-particle beam emitted from said charged-particle source, and

a scanning deflector for scanning said charged-particle beam in two-dimensional form on a sample,

wherein said scanning charged-particle microscope is characterized in that it has a means, located between the charged-particle source and said scanning deflector, by which said charged-particle beam focused on said sample is radiated so that the half-opening angle of said aperture for the charged-particle beam will have a band with respect to specific values of α_a and α_b , and an image of said sample is obtained by scanning said charged-particle beam which is cut off said band of said half-opening on said sample using said scanning deflector

- 6. (Original) A scanning charged-particle microscope as set forth in Claim 5 above, wherein the scanning charged-particle microscope is characterized in that a plate-like aperture body in which an annular aperture is formed is provided between said charged-particle source and said scanning deflector.
- 7. (Previously presented) A scanning charged-particle microscope as set forth in Claim 6 above, wherein the scanning charged-particle microscope is characterized in that in addition to said annular aperture, a circular aperture is provided in said plate-like aperture body, and in that there is provided a movement feature for positioning said annular aperture and said circular aperture on the orbit of said charged-particle beam.
 - 8. (Previously presented) A scanning charged-particle microscope having a charged-particle source,
- a lens for focusing the charged-particle beam emitted from said charged-particle source, and
- a scanning deflector for scanning said charged-particle beam in two-dimensional form on a sample,

wherein said scanning charged-particle microscope is characterized in that an aperture,

U.S. Patent Application No.: 09/943,262 Docket No.: 01743/193

located between the charged-particle source and said scanning deflector, for limiting the passage of said charged-particle beam is formed in two different places on the orbit thereof, and in that one of said two apertures is an annular aperture and the other is a circular, and

an image of said sample is obtained by scanning said charged-particle beam having passed through said annular aperture on said sample using said scanning deflector.

- 9. (Previously presented) A scanning charged-particle microscope as set forth in Claim 8 above, wherein the scanning charged-particle microscope is characterized in that said annular aperture is formed in a plate-like body, in that said plate-like body is also provided with a circular aperture, and in that there is provided a movement feature for positioning the annular aperture and the circular aperture on the orbit of said charged-particle beam.
- 10. (Previously presented) A scanning charged-particle microscope as set forth in Claim 8 above, wherein the scanning charged-particle microscope is characterized in that said circular aperture is formed in a plate-like body, in that said plate-like body is also provided with a charged-particle beam cutoff portion, and in that there is provided a movement feature for positioning said charged-particle beam cutoff portion and said circular aperture on the orbit of said charged-particle beam.
- 11. (Previously presented) A scanning charged-particle microscope as set forth in Claim 8 above, wherein the scanning charged-particle microscope is characterized in that said circular aperture and said annular aperture are formed in a first plate-like body and a second plate-like body, respectively, in that said first plate-like body is provided with a charged-particle beam cutoff portion in addition to the circular aperture and said second plate-like body is provided with a circular aperture in addition to the annular aperture, and in that both the first plate-like body and the second plate-like body are provided with a movement feature.
- 12. (Previously presented) A samples image forming method using a scanning charged-particle microscope having
 - a charged-particle source,
 - a lens for focusing the charged-particle beam emitted from said charged-particle source,

U.S. Patent Application No.: 09/943,262

Docket No.: 01743/193

and

a scanning deflector for scanning said charged-particle beam in two-dimensional form on a sample,

wherein said samples image forming method is characterized in that the image of a sample that has been acquired by scanning said charged-particle beam having passed through an annular aperture on said sample using said scanning deflector, said annular aperture being positioned on the orbit of the charged-particle beam and between said charged particle source and said scanning deflector, and the image of a sample that has been acquired with a circular aperture positioned on the orbit of the charged-particle beam are combined to form a new samples image.